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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/616,879 | 07/10/2003 | Toshio Ando | 01127D/LH | 2639 |

1933 7590 12/19/2003

FRISHAUF, HOLTZ, GOODMAN & CHICK, PC
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NEW YORK, NY 10017-2023

EXAMINER

MEYER, DAVID C

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2878

DATE MAILED: 12/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/616,879 | Applicant(s) ANDO ET AL. | |
| | Examiner David C. Meyer | Art Unit 2878 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/803,448.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 0703 6) ☐ Other: _____

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/803,448, filed on 9 March 2001.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 2 are rejected under 35 U.S.C. 102(e) as being anticipated by Massie (US 6,590,208).

Regarding claim 1, Massie discloses a probe holder for a scanning probe microscope apparatus having a probe 104 arranged in the vicinity of a surface 106 of a sample 108, a cantilever arm 102 for supporting the probe, a scanning unit 100 for relatively scanning the probe and the sample, and a displacement detection system 112 (Fig. 1). The scanning unit 100 includes actuators 130,132,134,114 for moving the probe relative to the surface of the sample along three distinct axes. One of the actuators 114 is a "balanced momentum probe holder" assembly comprising top and bottom actuators 150,146. The top and bottom actuators are attached at a central

support 144. A counterweight 162 is attached to the top actuator so that its mass balances that of the bottom actuator, which carries a cantilever substrate 160 for holding the cantilever 102 and probe 104 (Fig. 6). Hence, this actuator assembly "is held at a position in the vicinity of its center of gravity." Actuators 130, 132, and 134 are common cylindrical piezoelectric actuators. (See Figs. 1, 2, 3, and 6 and column 5, line 66 to column 8, line 26.)

Regarding claim 2, Massie discloses a holder 140 that holds the "first" actuator 114. The holder is a movable member. In addition, Massie discloses a 'Z' actuator that could be called a guide for restricting movement of the holder to the axis along which the first actuator generates motion. 'Y' and 'X' actuators 132, 130 constitute second and third actuators for moving the movable member along second and third axes that differ from the first axis.

Applicant cannot rely upon the foreign priority papers (filed in parent application 09/803,448) to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Allowable Subject Matter

Claim 3 is allowed. The following is an examiner's statement of reasons for allowance: Massie discloses only one actuator (114) that is held at its center of gravity. That actuator is supported by another actuator 134 that generates movement along a parallel axis. Therefore, Massie does not teach or suggest the invention as claimed, specifically the feature of "a second actuator for moving the object along a second axis

different from the first axis ... one [end of the second actuator] being connected to the first actuator”.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

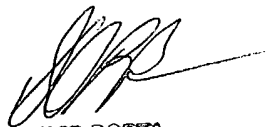
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakano (US 5,656,759), Yokoyama (US 5,438,206), Morimoto (US 5,965,881), and Miyazaki (US 4,798,989) disclose scanning probe microscopes with positioning devices or positioning devices that may be used in scanning probe microscopes, the positioning devices comprising actuators for moving a sample or a probe along three distinct axes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Meyer whose telephone number is 703-305-7955. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on 703-308-4852. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0935.3


DAVID PORTA
SUPERVISORY PATENT EXAMINER
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